



AZA Wildlife Contraception Center

MGA (melengestrol acetate) Implants

Manufacturer - ZooPharm division of Wildlife Pharmaceuticals, Colorado, USA.

Product Information - MGA implants are the most frequently used and consequently the contraceptive method for which we have the most information in the Wildlife Contraception Center database. Melengestrol acetate is a synthetic progestin. MGA implants contain 20% melengestrol acetate by weight in a silastic matrix. ***Because different species require different dosages, implants are not interchangeable. Please check with the WCC regarding implants that are not being utilized.*** Although duration of MGA implant efficacy may vary by individual and species, the continued recommendation is to replace them at 2-year intervals.

Calculating MGA Implant Doses – As of September 1, 2009 all MGA Implant dosages for primates and ungulates will be the responsibility of a licensed veterinarian. To calculate the proper dose, see tables for [Primates](#) and [Ungulates](#). Multiply the recommended dose by the animal's body weight in kilograms to calculate the appropriate implant weight. Send prescription, referencing this implant weight and preferred implant size to ZooPharm. Use their prescription number for recording the implant information for the individual. If an MGA implant is needed for a species that is not listed, please contact [Sally Boutelle](#) the AZA Wildlife Contraception Center directly for recommendations. [Click Here](#) for more detailed instructions for dosing and ordering MGA implants.

Implant Sizes – MGA Implants are made by molding the silastic matrix into 1cc, 3cc or 6cc syringe. Typically the 1cc or 3cc are used most commonly. The 1cc syringe typically produces a longer, thinner implant whereas the 3cc syringe will produce a shorter, thicker implant. If you prefer one shape over the other for a particular animal, please specify which syringe is desired. If no implant size is specified, the pharmacy will select the size they deem appropriate.

Ordering MGA Implants – MGA implants may be purchased by prescription through ZooPharm. All prescriptions should be written using their protocol (see [example prescription](#)). MGA implants cost \$25/gram (As of June 1st 2008) with a \$10 WCC surcharge plus shipping and handling. Authorizations for ordering MGA implants are NO longer required; prescription numbers should be kept for reporting to the WCC (see instructions above to calculate dose)

Storage – Implants should be stored at refrigeration temperatures (4°C).

Sterilization – MGA implants should be inserted using sterile surgical technique. In addition, it is recommended that implants be **gas-sterilized** with ethylene oxide followed

by **de-gassing** at room temperature for a minimum of **2 weeks** prior to use. Because the implants are porous, they must be de-gassed longer than metal instruments. Inadequate de-gassing may result in residual gas that may evoke a tissue reaction. If ethylene oxide sterilization is not available, the implant may be rinsed with alcohol and dried with sterile gauze prior to placement. Another alternative is the low temperature hydrogen peroxide gas sterilization (STERRAD) which is replacing the more dangerous EtO process in most hospitals. (More information can be found at www.sterrad.com). Our lab test found no difference in MGA release rates after implant sterilization with the STERRAD system, but long-term efficacy of these implants has not yet been evaluated. Sterilization with a cold-soak solution is not recommended, because the chemicals can be absorbed and/or MGA may be leached from the implant. Because heat may change the structure of the MGA, **implants should not be autoclaved.**

Insertion - Implants should be inserted between the scapulae intra-muscularly if possible, but, if subcutaneous placement is necessary, place implant in a “tunnel” created by blunt dissection of fascia away from the incision. Migration may be controlled by suturing the implant in place at the time of insertion. Implant loss can be reduced by properly sterilizing implants before insertion, using sterile insertion technique, and separating the animal from conspecifics during the period of healing. (NOTE: in some taxa such as the [callitrichids](#) and small [prosimians](#), steel sutures have been successful in preventing over-grooming and implant removal by conspecifics, thereby avoiding the need to separate animals). **The implant’s presence and location should be confirmed whenever the animal is handled.**

Monitoring implant placement - Identification transponder microchips inserted in MGA implants can be used to confirm presence and location. Implants cannot be supplied with transponders already in place; however, chips can be inserted in implants that are longer than the chip. Using sterile procedure, puncture implant longitudinally with needle containing transponder chip (it comes sterile) and insert into implant as you would under the skin. Insert implant into animal using standard surgical technique as outlined above. Secondly, stainless steel suture or orthopedic wires/pins or comparable material may be incorporated into the implant to make it visible on radiographs prior to sterilization.

Latency to effectiveness - Although individuals vary, threshold levels of the hormone should be reached in the blood within 1 to 3 days following IM insertion and within 1 week after SQ insertion. However, pre-ovulatory follicles are difficult to suppress, so, if cycle stage is not known, extra time must be allowed. Therefore, **separation or alternative contraception should be used for at least 1 week (if IM) or 2 weeks (if SQ) following insertion.**

Estrous cycles during treatment - MGA may effect contraception by blocking ovulation, causing thickening of cervical mucus, slowing ovum transport, and/or interfering with fertilization or implantation. However, follicle growth may continue and sometimes be accompanied by estrogen production sufficient to cause estrous behavior. Ovulation may occur even though pregnancy does not ensue. Higher progestin doses may be preferred, so that estrous behavior is prevented, but may not be effective in completely suppressing follicle growth and some estradiol production.

Duration of efficacy and reversibility - Implants are considered effective for at least 2 years and possibly much longer, depending on species and individual differences, but in some cases have been found to be effective for as much as 5 years when left in place. This means that ***implants should be replaced every 2 years to ensure contraception, but should be removed when pregnancy is desired.*** For this reason too, old implants should be removed when a new one is placed to avoid administering a higher than intended dose. Once the implant is removed, the circulating MGA clears very rapidly, so that ovulation and conception may occur within days, although actual latency is usually longer and will depend on the individual.

Use during pregnancy - Synthetic progestins like MGA are not recommended in pregnant animals because of the possibility of prolonged gestation, stillbirth, abortion, etc. in some species, although the effect may depend on dose. Progestins in late pregnancy seem not to interfere with parturition in primates, but this may be a taxon-specific phenomenon.

Use during lactation - Progestins are sometimes prescribed for lactating women and are considered generally safe for nursing infants.

Use in pre-pubertals or juveniles – Future reproduction was not affected in calves of domestic cows on MGA-treated feed, but no studies of pre-pubertal treatment with MGA or other progestins have been conducted with other species, so possible long-term effects on fertility are not known.

Precautions – MGA can cause weight gain in all species. Possible deleterious effects on uterine and mammary tissues vary greatly by species; see cautions for each taxon.

Consideration for seasonal breeders - Treatment should begin at least one month before the anticipated onset of the breeding season. However, in canids, treatment should begin more than two months before the time of anticipated estrus, because proestrus increases in estradiol can begin as much as two months before estrus, and it is known that this endogenous estradiol can exacerbate deleterious effects of progestins on the uterus and mammary glands. This synergy of estradiol and progestins may also occur in other carnivores, such as mustelids and ursids.

Implant disposal – used implants received from ZooPharm or Ed Plotka should be disposed of in proper waste containers after use.

Reporting Requirements - All institutions must submit a complete [Contraception Center Survey](#) to the AZA Wildlife Contraception Center. The product will no longer be sold to any institution that fails to submit the annual survey.

Submit questions to:

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